

### REMARKS

Applicant thanks the Examiner for allowing claims 15, 19 and 20 and indicating that claims 2-4 and 8-14 are directed to patentable subject matter. Applicant has amended claim 1 to clarify that the central drain as disclosed at page 3, line 23, to page 4, line 6, for example, and has also amended claims 16 and 18 to indicate that at least one vessel of the water feature is closed.

Claims 1, 5 and 7 stand rejected as anticipated by “the new patent cited to” Høie. Since the Examiner has cited no new prior art with this Action, applicant assumes that the Examiner is continuing to refer to U.S. Patent No. 4,516,726 as Høie, which is not newly cited. This rejection is respectfully traversed.

The amendments to claim 1, which specify the central drain as extending along the longitudinal central axis of the vessel and as being located and configured so that water exiting the vessel flows generally in a direction of the central axis, overcome this rejection since Høie’s “diverging end 7 of an outlet conduit 4,” identified by the Examiner in paragraph 2 of the Action as corresponding to the claimed central drain, is not located along a central longitudinal axis of Høie’s vessel and is not “configured so that water exiting the vessel flows generally in a direction of the central axis.” Høie’s outlet conduit 4 extends in a direction that is at right angles to the claimed configuration and does not provide the mode of water flow exhibited by the water feature of claim 1. Furthermore, given Høie’s disclosure, there would have been no reason to modify Høie so as to achieve the claimed invention. Claims 1, 5 and 7 are patentable over Høie.

Claims 6, 16 and 18 stand rejected under 35 USC 103(a) on Høie. The Examiner’s statement of this rejection once again reads as follows, just as it did in the previous Action:

5. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoie.

6. With respect to claim 6, a lid for vessel 1 is not disclosed in the reference. However, one of ordinary skill in the art would recognize that a lid therefor could be provided as a means to prevent spilling of the contents resulting from the turbulence created by the vortex.

7. The method steps recited in claim 17 are not specifically described by Hoie. However, at col. 2, lines 50-59, patentee describes operation of the system after vessel 1 has been filled to the desired level, wherein spigots B, C are “regulated to maintain the desired water level in the tank during the subsequent mixing and spraying of the admixed components”. Therefore, when spigots A, B, C, D are initially opened for continuous flow, the water level is increasing to the desired level and the rate of introduction of the water exceeds the rate of draining. Thereafter, spigot B may be regulated as suggested to change the water level, or reduce the rate of introduction to the vessel such that the rate of draining exceeds the rate of introduction. One of ordinary skill in the art would, therefore, have a suggestion for varying the rates of draining and introduction of water as claimed for achieving the desired water level.

The Examiner has added to this logic the comments regarding claim 18 in paragraph 10 of the Action and the following in paragraph 13 of the Action: “With respect to claims 16 and 18, applicant has not pointed out any of the claimed steps which have not been identified in the reference.” This rejection and its supporting reasoning are respectfully traversed.

Since Høie once again does not disclose the subject matter of amended claim 1 for the reasons set forth above, the rejection of dependent claim 6 is untenable. Applicant also respectfully submits that Høie would not have rendered obvious the provision of the airtight lid on the upper end of the vessel body to prevent water overflow from the vessel as claimed in claim 6. Water overflow is not the same as turbulence; the function of the lid disclosed and claimed in this application has nothing to do with turbulence. In fact, if Høie’s vessel had been equipped with the claimed lid and thus sealed at the top without another vent above the water level as required by claim 6, persons of ordinary skill in this art would have recognized that the vessel would not continue to fill and that an over pressure would result, causing the system to lock hydraulically. Simply put, Høie’s system would not work if supplied with the lid of claim 6, so it could not have been obvious from Høie to use the claimed lid. Applicant’s invention is unique in having a sealed lid on a vortex vessel and in using the drain at the bottom to pass air and water at the same time because of the formation of an air core with the vortex. The combination of the lid of claim 6 with the drain below the free surface of the water allows for the equalization of pressure and allows additional features not possible with an open top system such

as preventing overflow and debris ingress and providing a water feature that is sealed and isolated from the display environment. The Examiner has failed to respond to this argument, which stands unrefuted on this record. When these aspects of the invention of claim 6, which are part of the subject matter of claim 6 as a whole, are considered, any case of *prima facie* obviousness of claim 6 on Høie alone evaporates.

On claims 16 and 18, which have been amended to specify that at least one of the vessels is closed and the vortex is created in that closed vessel, the same logic applies, that is, if the vessel in Høie in which the vortex is formed were closed as claimed, persons of ordinary skill in the art would have believed that the process would not have worked. Thus, claims 16 and 18 could not have been obvious because persons of ordinary skill in the art would have been told by their ordinary knowledge derived from Høie's disclosure that applicant's process as claimed in claims 16 and 18 would not work.

Claims 16 and 18 also stand rejected as anticipated by Koenig. This rejection is respectfully traversed.

The disclosure in Koenig relates to a water basin which is specially shaped to have a reducing cross-section and a tangential inlet. Water is allowed to flow into the basin under gravity. That cannot happen in the claimed closed vessel. Koenig also fails to disclose a key element of the invention of claim 16, that the rate of introduction of the water to the closed vessel exceeds the rate of draining when the height of the water volume is increasing and the rate of draining exceeds the rate of introduction when the height of the water volume is decreasing. Instead, in Koenig the height of the vortex builds up and, at a critical point, the vortex collapses. Koenig says nothing whatever about causing the water level to rise or lower by virtue of the claimed different rates of water introduction and draining. As Koenig says, "[t]he constantly inflowing liquid [is] initially held up above the outflow by the centrifugal force but then yields to the force of gravity, so that the vortex collapses and the pool empties completely." This is not a disclosure of controlling vortex height by comparing water inflow and outflow rates as claimed;


instead, Koenig is referring to the physical locations of the inflow and outflow. As to claim 18, there is no disclosure in Koenig about air being introduced to or removed from a closed vessel via an outlet of the vessel as the height of the volume of water is varied. The laws of physics to which the Examiner refers apply to open, not closed, vessels, as explained above with respect to Høie. The method of operation of Koenig's device uses a different principle, from what can be seen in Koenig. The meager abstract falls far short of the disclosure required, and the Examiner has not seen fit to make a translation of Koenig of record. As noted in earlier prosecution, the undersigned's reading of Koenig does not reveal such disclosure, either.

For the foregoing reasons, early action allowing claims 1-16 and 18-20 in this application is solicited.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing 532412000100.

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